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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,943	03/23/2001	Henrique S. Malvar	MCS-073-00	8254
27662	7590	04/23/2004	EXAMINER	
LYON & HARR, LLP 300 ESPLANADE DRIVE, SUITE 800 OXNARD, CA 93036			COUSO, JOSE L	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,943

Applicant(s)

MALVAR, HENRIQUE S.

Examiner

Jose L. Couso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-34 is/are allowed.
- 6) ☒ Claim(s) 1, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 12-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/24/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kajiwara et al. (U.S. Patent No. 5,960,116).

With regard to claim 1, Kajiwara describes a process for encoding bi-level images which describes the following process actions: for each pixel location in raster order in the bi-level image, predicting a binary value for the pixel at a pixel location under consideration based on its context, wherein a context of a pixel refers to predicted values of a prescribed pattern of pixels preceding the pixel in a raster order (see for example figure 6, element 1104 and refer for example to column 6, lines 16-19, the binary aspect of the image is discussed in column 5, lines 25-29); determining whether the predicted pixel value matches the actual pixel value for the pixel location under consideration (see figure 6, element 1110 and refer for example to column 6, lines 29-32, and refer to column 8, line 38 through column 9, line 56, the latter cited portion of the reference describes how the predicted error is used in determining whether the predicted pixel value matches the actual pixel value by using context correspondence by using an appropriate parameter); and compressing the data concerning at which pixel locations the predicted pixel values match and do not match the actual values using a context-dependent, backward adaptive, Run-Length-Rice encoding technique

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(see figure 6, element 1113 and refer for example to column 6, line 36 through column 7, line 17).

With regard to claim 10, Kajiwara describes comparing the predicted pixel value to the actual pixel value of the pixel location under consideration (refer for example to column 5, lines 6-12); and assigning a prediction error value to the pixel location, wherein the prediction error value has a first binary value if the predicted pixel value matches the actual pixel value and a second binary value if the predicted pixel value is different from the actual pixel value (refer for example to column 5, lines 13-26).

As to claim 11, Kajiwara describes wherein the first binary value associated with the prediction error values is a "0", and the second binary value associated with the prediction error values is a "1" (refer for example to column 5, lines 17-20).

3. Claims 21-34 are allowed.

4. Claims 2-9 and 12-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an examiner's statement of reasons for allowance: The prior art of the record fail to teach or suggest singly and/or in combination a process for encoding bi-level images which provides for each pixel location in raster order in the bi-level image, predicting a binary value for the pixel at a pixel location under consideration

based on its context, wherein a context of a pixel refers to predicted values of a prescribed pattern of pixels preceding the pixel in a raster order, determining whether the predicted pixel value matches the actual pixel value for the pixel location under consideration, compressing the data concerning at which pixel locations the predicted pixel values match and do not match the actual values using a context-dependent, backward adaptive, Run-Length-Rice encoding technique, for assigning a prescribed initial probability value to each of a set of potential context indexes, computing the context index associated with the prescribed pattern of pixels preceding the pixel location and identifies the probability value assigned to the computed context index, and also provides for decoding a bi-level image encoded by the aforementioned process by receiving the series of codewords, using a restoration image of the encoded bi-level image, predicting a binary value, deriving a prediction error value and comparing using an exclusive-OR the prediction error assigned with the predicted pixel value as prescribed for in the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Weinberger et al., Lei, Talluri et al. and Nakayama ('676) and ('365) all disclose systems similar to applicant's claimed invention.

Malvar ('280) and ('419) disclose applicant's prior US patents.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.


JOSE L. COUSO
PRIMARY EXAMINER

Jlc
April 13, 2004